

CERTIFICACIONES DE SUSTENTABILIDAD EN LA CADENA DE VALOR CACAO ECUADOR ¿ES EL GOBIERNO O SON LAS MULTINACIONALES QUIENES EJERCEN LA GOBERNANZA?

Sustainability certifications in the cocoa value chain in Ecuador
¿Who exercises governance, the government or the multinationals?

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RESUMEN

Contexto: Desde 1998, el Gobierno ecuatoriano a través de la política pública, aplica como estrategia de competitividad, cambios en la cadena de valor y adopta prácticas sostenibles de cacao. Estos tipos de normas de calidad exigidas por los países de destino exportable, que serán el punto focal de la presente investigación a fin de determinar quién ejerce la gobernanza en la cadena. **Teorías:** Las teorías en este trabajo giran alrededor de dos; una de forma macro denominada teoría de desarrollo económico, y una micro que es desarrollada a nivel de empresas denominada como la teoría de la planeación estratégica. **Método:** La metodología a aplicar en la presente investigación es deductiva, de tipo cualitativo, la información secundaria levantada sobre temas de sostenibilidad en los procesos corresponde al análisis documental nacional e internacional realizado sobre cadenas de valor en el sector de la agroindustria, a los organismos de control de calidad estatal, a documentos técnicos nacionales e internacionales; así como, revistas indexadas en

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base Scopus. **Resultados:** Se cubren los tres objetivos de estudio: 1. Describir la caracterización de la cadena y la estrategia del Gobierno Ecuatoriano 2. Analizar los tipos de normas nacionales que rigen la cadena; y, 3 Develar quién ejerce la gobernanza.

Conclusiones: Finalmente, la investigación muestra cómo las certificaciones de sustentabilidad se convierten en mecanismos de gobernanza en la cadena de valor cacao a través de las consultoras internacionales.

Palabras clave: Gobernanza, certificaciones estándar privadas, agroindustria, sustentabilidad, cadena de valor cacao.

Códigos JEL: F63, F13, J88, L52

ABSTRACT

Context: Since 1998, the Ecuadorian government, through public policy, has been applying changes in the value chain and adopting sustainable cocoa practices as a strategy for competitiveness. These types of quality standards required by the countries of export destination will be the focus of this research in order to determine who exercises governance in the chain. **Theories:** this paper revolve around two theories: a macro one, named economic development theory, and a micro one developed at the firm level, the strategic planning theory. **Method:** The methodology to be applied in this research is deductive and qualitative, the secondary information gathered on sustainability issues in the processes corresponds to the national and international documentary analysis of value chains in the agroindustry sector, state quality control agencies, national and international technical documents, as well as journals indexed in Scopus. **Results:** The three study objectives are covered: 1. Description of the characterization of the chain and the Ecuadorian government's strategy; 2. Analysis of the types of national regulations governing the chain; and, 3. Identificaton of who exercises governance. **Conclusions:** Finally, the research shows how sustainability certifications become governance mechanisms in the cocoa value chain through international consulting firms.

Keywords: Governance, private standard certifications, agribusiness, sustainability, value chain cocoa.

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INTRODUCCIÓN

Historically, the cocoa sector has generated great expectation in the world. Cocoa or *Theobroma cacao* from the Greek Theo "God" and broma "food" (Evan Grivetti, 2009) originated approximately 5000 years ago in the Amazon region of Ecuador and marked the economy of the country until today through the production of cocoa "arriba". With globalization and the emergence of new chocolate factories in the international market, the population of Ecuador has become increasingly specialized in the management of this crop until it has become the supplier of two thirds of the world's demand. However, issues such as climate change, poverty and inequality continued to mark the global socioeconomic scheme and made increasingly necessary the implementation of environmentally friendly practices and a harmonious relationship Government-Business-Society.

Since 1998, the Government of Ecuador, faced with this problem, decided to implement a competitiveness strategy that contemplates changes in the value chain through the adoption of sustainable organic cocoa practices towards a more conscious transformation of the "productive matrix" (SENPLADES - National Secretariat of Planning and Development, 2013, p. 6), where equitable Sustainability practices are promoted by the business sector.

The purpose of this paper is to review the literature on governance in this agri-food industry to confirm the influence that private certifiers have on governments, according to Hatanaka et al. (2005), and determine whether it is the private international certifiers or the government that exercises governance over the cocoa value chain in Ecuador?

Given the above, the structure of this article includes a theoretical framework that explains the theories, approaches and research related to the evolution of power in agribusiness at the international level, the methodology applied to establish, through documentary analysis, the level of governance of the selected chain and who exercises this governance; it describes the actors in the chain, the strategy implemented by the government to comply with the sustainability standards required by the countries of export destination, types of national regulations, aspects of industrial policy used by the Ecuadorian government through phytosanitary control agencies to contract five international certifiers. Finally, this paper concludes who exercises governance in the cocoa VC and identifies future lines of research.

THEORETICAL FRAMEWORK

The study of the cocoa production chain revolves around two theories: a macro one called the theory of economic development (at the government level) and a micro one that is developed at the enterprise level and is called the theory of strategic planning. The VC approach was born precisely within the theory of economic development, when the notable German economist Hirschman, in his work *The strategic of economics development* (1961, p. 111) mentions that the economic development of nations is possible thanks to the "forward and backward linkages" generated in the industrialization processes, which are then transformed into value chains. This theory led to new approaches, i.e., not only to the economic but also to the social, such as: modernization theory, dependency theory, world systems theory and globalization theory, each with prominent authors focusing their attention on social-cultural-intrinsic factors (Smelser, 1967), greater government representation, import substitution to promote industrialization (Prebisch, 1950), social-economic-political (Wallerstein, 1987), and cultural-economic-financial-political and technological (Weber, 1988) respectively, approaches that became a good neocepaline argumentation in which, like Hirschman, the Economic Commission for Latin America and the Caribbean (ECLAC) relates the macro with the micro and establishes that the long-term and self-sustained growth of the economy is generated by the efficiency in the production levels of enterprises (ECLAC, 1990). Currently, this theory of economic development has evolved to become the theory of sustainable development as established by the United Nations Development Program (UNDP) (2015), with a broader perspective that not only seeks the economic development of nations, but also a benefit for society, which in turn, ensures the development of environmentally friendly practices.

The theory of strategic planning, represented by the American economist, Porter, also makes a significant contribution to the term "value chain" because, from a micro perspective, he describes it as the set of activities that companies carry out to compete in an industry, highlighting the concept of links (Porter, 1985). These valuable contributions made by the author on competitiveness and the evolution of its various approaches such as corporate strategy (Porter, 1987), as a Nation (Porter, 1990), vertical and horizontal

analysis of value chains (Porter, 1998), clusters (Porter, 1999), business-society strategy and the contribution of the Corporate Social Responsibility (CSR) concept (Porter & Kramer, 2006), as well as the five forces (Porter, 2008) and the creation of shared value (Porter & Kramer, 2011), generate a good contribution to the scientific knowledge of Value Chains (VC) with a socially responsible business approach.

According to Málaga (2016), the process for strategic planning is to have a corporate strategy. In addition to choosing the right plan for organizational growth and development of companies in today's world, it must also ensure that the company can react quickly and adequately to the increasingly dynamic markets and their highly competitive environments. The strategy process has several perspectives. It could be considered an overall program designed to define and achieve the organization's objectives and implement its mission, implying the ability to play a modernly active, rational, and conceptually well-defined role. This perspective distributes the conceptual weight between the strategic mission and strategic thinking. Another view in the strategic process is to have a pattern of the organization's responses to its environment over time; every organization has a relationship with its environment that can be examined and described.

Generic strategies are based on the principle that the overall design of an organization is described through the achievement of objectives, policies, and methods to arrive at an integral design which should provide the company with advantages over its market. Michael Porter, around 1980, laid the foundations for these concepts, starting from the three competitive approaches: cost leadership, differentiation, and focus strategy. According to Porter, cost leadership and differentiation strategies target the entire market, while the generic focus strategy limits its target to a segment or niche. (Málaga, 2016)

Padilla Pérez (2017), states that a value chain is made up of four elements: links, relationships, value-added, and governance. The links and their components are responsible for each step involved in producing a good or service (producers, industrialists, and marketers). Relationships are the interactions between each of the actors within each link or throughout the chain. Other important aspect is the value-added which includes the transformation of the primary product and generates an economic incentive and governance. The second seeks to identify who wields power in the chain (the market or

exportable destination, producers, industrialists, government, among others), agents' behavior, the processes, and the rules they must comply with.

The contribution of these two theories plus the previous study of Gereffi and Korzeniewicz (1994) and Gereffi et al., (2005) allow establishing the theoretical framework to identify governance in VCs; their levels of explicit coordination and the asymmetry of power, which generate the five types of governance (hierarchical, captive, relational, modular and market) and indicate how the establishment of technical or process standards help to reduce the complexity of information/knowledge transfer required by the leading company. In this same period, two major authors are added: Hatanaka and Ponte. Hatanaka et al. (2005), who analyze how private sustainability standards certifications or Third-party certification (TPC) become an important regulatory mechanism in the agri-food system, in which public governance ceases to be responsible for monitoring food safety and quality standards and transfers this power to private international certifiers or third parties as they are called in the paper. Ponte & Gibbon (2005), on the other hand, emphasize through the theory of conventions, how quality standards, conventions and governance of global value chains are increasingly "buyer-driven", due to the integration of quality standards with widely accepted certifications. In the end, Gereffi (1994) reviews the study on governance in industries and explains how globalization has marked significant changes after the Washington Consensus, where the bargaining power of leading firms in the VC has been transferred to large suppliers in developing economies.

At the same time, it is important that governments incorporate the Triple Helix model (created by Henry Etzkowitz, Loet Leydesdorff and Colin Jones-Evans in 1996) in the design and implementation of public policies, in order to achieve the articulation of the State with the private sector and universities to foster economic growth and development. The triple helix model focuses on the analysis of the relationships and mutual interactions between universities and scientific environments as the first blade of the helix, companies and industries as the second blade, and administrations or governments as the third blade. (González, 2009).

This model is representative of the interaction the government has within the helix. It allows us to know if it is the government or the multinationals who exercises the governance of sustainability certifications in the value chain. It also intends the University is a creator of knowledge and plays a key role in the relationship between business and government, and how they are developed to create innovation in organizations as a source of knowledge creation. It is considered as an intellectual process oriented to visualize the evolution of the relationships between university and society, and on the other hand characterized by the intervention of the university in the economic and social processes. The state embraces industry and academia and regulates the relations between the institutional spheres. The role of government is a primary factor in the development of government-business-university linkages. The Triple Helix model implies an active participation of the government through legislation, instruments and fiscal incentives conducive to the promotion and dynamism of university-industry relations for its proper functioning. On the other hand, the development of legislation that encourages the development of companies within universities benefits the business-university linkage greatly (Chang Castillo, 2013).

Several studies have been carried out on international agribusiness standards, their relationship with public policy and the rapid emergence of these certifying companies, such as those by Henson and Reardon (2005), who analyze the impacts resulting from the application of these environmentally friendly quality standards in both industrialized and developing countries. Ménard and Valceschini (2005) discuss how this quality monitoring from private institutions becomes the central issue for public policy in Europe and the importance of analyzing this solution from the perspective of transaction costs. Afterwards, Henson (2008), also analyzes the role of public and private quality standards as a mechanism for regulating the international food industry. Subsequently, he complemented the study of this work by joining Humphrey (2010) to analyze the complexities of private standards in agri-food chains around the world and how these measures affect developing countries. Finally, and as mentioned by Peretti et al. "It is clear that participation in VCs puts the entire industry on a global stage where other actors emerge with specific demands and requirements related to sustainability" (2019, p. 98).

One of the Government's priorities within its public policy on the issue of sustainable development in production chains was the contributions generated by the theory of sustainable development (Hirschman, 1961) , the Brundtland Report (1987) on Environment and Development of the United Nations, the research conducted by ECLAC, the Millennium Development Goals (MDGs) in force during the period 2000-2015, which were later restructured under the name of Sustainable Development Goals (SDGs) and are in force from 2015 to 2030.

This strategy, as mentioned by Ton et al, consisted of establishing quality improvement within the cocoa VC. "(...) This policy within the chain promotes the economic sustainability of cocoa production for smallholders" (2008, p. 36), so that, together with various actors such as the Ministry of Agriculture and Livestock (MAG), the Agency for Regulation and Phytosanitary and Zoosanitary Control – Agrocalidad (2019) and the Food Safety Coordination, they guarantee agri-food quality from the primary production stage through the implementation of national and international standards.

METHOD:

The methodology used in this study is qualitative and deductive, since through the collection of national and international data, the aim is to deduce the influence generated by this type of sustainability standards on the VC in question. The documentary collection of the comparative analysis of public policies, governance and economic sustainability of the chain carried out in 2008 by Ton et al., the technical reports made by the European Union Commission for the Competitive Improvement Plan for the sustainable agro-industrial development of the cocoa and chocolate chain (Technical Commission of the European Union, 2018) are some of the parameters of analysis to answer the question posed and to discover if Ecuador is also influenced by this trend like the rest of the countries in the world.

The information gathered through documentary research on national and international standards applied in the Ecuadorian cocoa VC as well as the sustainability reports published by leading companies and other private and governmental sources related to each of the

links were systematized and integrated based on three study objectives: 1. To describe the characterization of the cocoa value chain (VC) and the Ecuadorian Government's strategy. 2. To analyze the types of national standards that govern the chain, and 3. To reveal who exercises governance in the chain and how this governance is related to the five international quality certifiers contracted by the government through its state accreditation agencies.

RESULTS

On the characterization of the cocoa VC and the strategy applied by the Ecuadorian Government.

According to information collected by Chavez-Malgiaritta (2017) and the Technical Commission of the European Union (2018), the cocoa VC is made up of three links: producers, processors and traders. Each of them, following different sustainable practices in the agroindustry, decide to adhere to local quality standards offered by the government or international certifications offered by multinational companies.

The evolution of cocoa chain governance systems according to the study by Ton et al. (2008) shows the Ecuadorian government's strategy to improve product quality through sustainable practices. Since 1998, this chain integration strategy described in Figure 1 has been linked to two international concepts: the concept of "competitiveness" described by Porter in his 1990 work *The Competitive Advantage of Nations*; and the concept of "total quality" whose timeline traced by Taguchi (1979), Feigenbaum (1986), Crosby (1987), Deming (1989) and Juran (1990) shows quality as the key element for achieving productivity and cost reduction to conquer the market.

The four axes described in Figure 1 show state government, joint government, market governance and corporate governance as the key actors in the transformation of the cocoa value chain in Ecuador, an approach that has been widely developed at the international level. According to a study by Griffiths and Zammuto (2005), this creation of competitive advantages in the industry has become one of the key tasks of governments, in which, through an "integrating framework" between the capabilities of the company, market-driven policies and policies at the state level, it is possible to achieve a balance between

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strategic management and political economy. Governments (as a general rule and according to Griffiths and Zammuto's study) bear the cost of adaptation of industries.

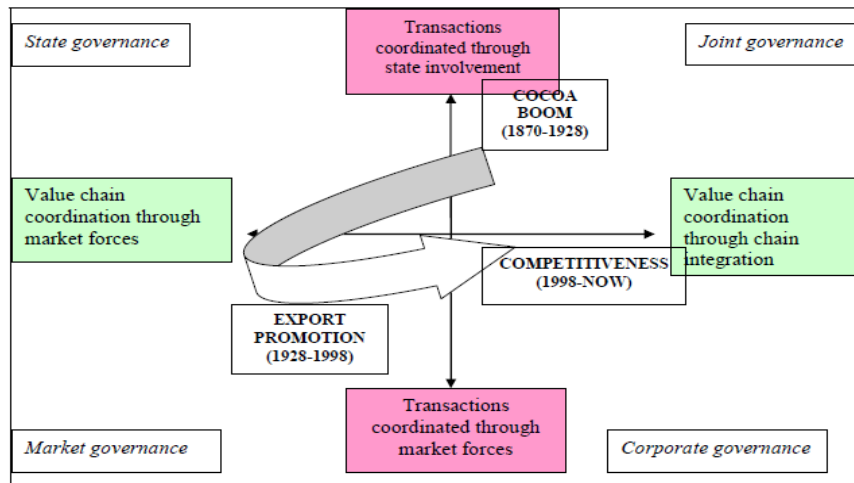


Figure 1. Changes in VC with the adoption of sustainable cocoa practices. Taken from Ton et al. (2008, p. 28).

Following the methodology of the Economic Commission for Latin America and the Caribbean (ECLAC), the government of Ecuador designed and developed public policies based on the six steps described in Figure 2. As a result, and for the first time in the history of this country, an "industrial policy 2016-2025" was implemented, which landed with the Competitive Improvement Plan (PMC) Cacao 2019-2030 years later.

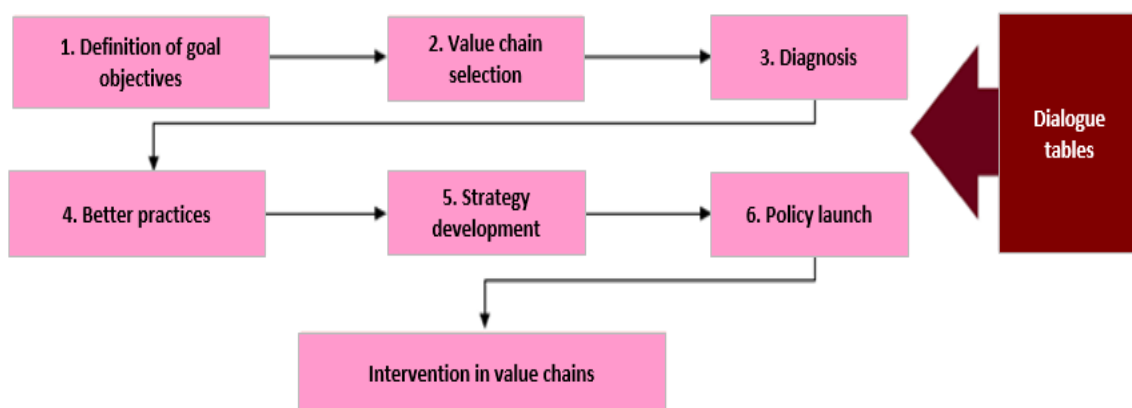


Figure 2. Methodologies for strengthening value chains. Information extracted from Oddone et al. (2014).

Types of national standards governing cocoa VC in Ecuador

The success of the cocoa reactivation program revolves around quality, to generate sustainable production of the bean, for which the application of two technical standards

related to cocoa VC is contemplated: national and international. The national category contemplates three Ecuadorian Technical Standards (NTE) established by the Ecuadorian Institute of Standardization (INEN)- State agency created in 1970 with the objective of generating standards that guarantee commercial operations (2018). These three national standards seek to regulate the marketing of cocoa beans, chocolates; as well as, pastes, masses or cocoa liquor respectively (NTE INEN 176, NTE INEN 621 and NTE INEN 623 nomenclatures of "Ecuadorian technical standards issued by INEN"). International standards vary according to the country of export destination. Europe, for example, is governed by European Union Regulation 488 and ISO 34101 on the sustainability and traceability of cocoa. The regulations on compliance with these international standards are in charge of private certifying companies, as will be discussed in the following section.

The national voluntary standard for cocoa beans - NTE INEN 176 - establishes the quality requirements for cocoa beans and the criteria for their classification. This standard groups three varieties of fine cocoa and two varieties of cocoa CCN51 (the most productive cocoa clone, discovered in 1965 by the ambateño agronomist Homero Castro Zurita. The acronym CCN-51 stands for "Castro Naranjal Collection" - Castro in honor of its author and Naranjal based on the geographical location where the first clones were planted. This term was legally accepted by the government of Ecuador and is recognized as the most productive clone in the world now). Within the fine cocoa variety, there are Arriba Superior Summer Selecto (A. S. S. S. S); Arriba Superior Selecto (A.S.S) and Arriba Superior Epoca (A.S.E). And, in cocoa category CCN51: Cacao Superior Selecto (C.S.S) and Cacao Superior Corriente (C.S.C). Additionally, within each category there are very specific requirements in relation to moisture level, weight, fermentation and concentration.

For chocolates, Ecuadorian Technical Standard 621 (NTE INEN 621) is mandatory and establishes seven types: pure chocolate, sweet chocolate, unsweetened, couverture, milk, milk couverture and white. For cocoa paste, mass or liquor, Ecuadorian Technical Standard 623 (NTE INEN 623) is voluntary and basically establishes the parameters for the mechanical disintegration of cocoa beans, indicating that, for marketing free of impurities, maximum percentages of fat, moisture, natural cocoa starch, crude fiber and total ash must be met.

Governance CV Cacao Ecuador: State accreditation agency and international quality certifiers.

Aware of creating a national competitive strategy, the government of Ecuador through the Ministry of Agriculture and Livestock (MAG) delegated the Ecuadorian Agency of Agricultural Quality Assurance (AGROCALIDAD) as its sole attached unit responsible for phytosanitary and zoosanitary control and regulation at the national level to contract international certifiers to operate in the country and allow it to guarantee access of its products to the international market. The five international certifiers hired by the state accreditation body were: BSC Oko Garantie, Ceres, Control Unión, Ecocert and Icea (Universe Newspaper, 2018).

Kiwa BSC OKO Garantie Cia. Ltda., which is a German certifier considered one of the 20 most important companies in the world in terms of testing, inspection and certification, offers in Ecuador its support for organic cocoa production standards in eight types of certifications (Kiwa BSC Oko Garantie, 2019). *CERES* which is a multinational certifier and like Kiwa BSC, offers its accompaniment in eight types of standards for other exportable destination countries such as Germany, United States, Canada, Japan, Switzerland, Sweden, United Kingdom, Africa and the entire Asian continent (CERES, 2019). *Control Unión Perú*, a certifier of Peruvian origin, with representation in more than seventy countries that offers its accompaniment for organic cocoa production standards in ten types of certifications (Control Union Peru SAC, 2019).

Ecocert is a multinational with presence in more than 130 countries and has extensive experience in macro certification programs in organic agriculture for organic cocoa production: UTZ for example, which is a special program applicable for cocoa and coffee in more than 116 countries, Rainforest which is an alliance based in New York specialized in integrating certification systems for sustainable agriculture and Global GAP that guarantees safe practices in food production for the whole world (Ecocert Ecuador S.A., 2019). And, the Institute for Ethical and Environmental Certification of Italy - ICEA, which is a very important certifying body throughout Europe has extensive experience in

certification of food from organic agriculture, offers four types of certifications for organic cocoa production: the EU which are the quality standards applicable in Europe, USDA-Nop (standards applicable for the US market), JAS (quality standards applied in Japan) and Bio Suisse Organic (standards governing the Swiss territory) (ICEA Ecuador, 2019).











LOGO	CERTIFICATION	LOGO	CERTIFICATION	LOGO	CERTIFICATION
	UE		Bio Suisse		RAINFOREST ALLIANCE
	UTZ		KRAV		Global GAP
	USDA organic		AB		Naturland
	FAIRTRADE Ibérica		India NPOP		Soil Association
	JAS		FIPA EFAPA Corea		Organic Sagarpa Mexico

Figure 3. Sustainability certifications for organic cocoa production offered by international certifiers in Ecuador. Information extracted from Agrocalidad. Own elaboration.

Since 2015, international certifiers contracted by the government have managed to certify 32 actors in the cocoa chain, including 5 natural persons who own farms, 17 marketing companies, 2 foundations, 4 farmers' associations, 3 unions of farmers' associations and 1 federation of organizations. In relation to the number of certified actors in the global cocoa value chain, the German certifier BSC is the one that provided the largest number of advisory services, opening the doors to the international market for Ecuador under the EU, UTZ, USDA Organic, Fairtrade, JAS and BIO Suisse quality certifications. EU whose regulations guarantee organic production and increase the level of competitiveness of the product throughout Europe; UTZ whose certification program is considered the largest for coffee and cocoa in the world (116 countries); USDA Organic which is also a certification program but applies exclusively to the United States and Canada; FAIRTRADE Iberica, which uses fair trade rules, promotes sustainable production and creates a strategic link between cocoa producers, entrepreneurs and consumers worldwide; JAS, which are the quality standards issued by the Japanese government; and BIO Suisse, whose central organization groups large Swiss organic producers.

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Although it is true that what has been described so far could generate the perception that it is the government that exercises control over the international certifiers hired (Captive Governance), the reality is different, because as mentioned by Ton et al. "in Ecuador, international buyers dominate the cocoa VC" (2008, p. 36); which leads to the conclusion that it is these international buyers (Market Governance) who, in turn, demand that the leading companies conform to their standards. International quality standards are regulated by private certifiers, whose relationship/ownership are precisely those powers.

An asymmetry of power that falls mostly on the market but, from a panoramic view, allows the state government to take advantage in certain aspects, for example, financing of improvement plans, the most recent called "Competitive Improvement Plan for the industrial development of the cocoa and chocolate chain - PMC cacao", whose funds correspond to the European Union Cooperation with a time horizon to 2030 (Technical Commission of the European Union, 2018). In other words, the same international market assumes the transaction costs to create the Ecuadorian government a national competitive advantage.

CONCLUSIONS AND IMPLICATIONS FOR FUTURE RESEARCH

At the international level, as mentioned by Peretti et al. (2019), participation in value chains places industries in a global scenario where the demands and requirements of the actors revolve around sustainability. The information obtained for the specific case of the CVG cocoa Ecuador, allows inferring that, the quality norms or international quality standards created by private certifiers influenced the production processes of the leading companies as their key actors. According to the study by Ton et al. (2008), the sustainability applied as a public policy strategy to strengthen the cocoa VC aimed at profound changes through the adoption of sustainable practices since 1998. These changes were possible thanks to agreements between the government of Ecuador (through its control bodies: Agrocalidad and the Ecuadorian Accreditation Service SAE) and the five multinational companies.

The standards contemplated according to the exportable destination United States, European Union, Japan, Switzerland, Sweden, etc., allowed Ecuador to promote economic

development as a nation, creating a competitive advantage in the international market through sustainable organic cocoa practices. This national strategy in turn favored each of the 32 actors in the certified chain, generating greater competitiveness among those who are still awaiting certification.

The Triple Helix model that presents the linkage between business, government, and the academy is also a tool for the analysis of relationships, including social, historical, and/or economic aspects. This model becomes a tool that serves as a basis for the analysis of the context from different perspectives: from the purely business, technological, educational field and university-business-government linkage relationships in the context of the industry of a region or country. Another important aspect is the use of technology, where the application of knowledge and business interest in a given activity is evident. The technology development is immersed in the university fundamental interest, the application of knowledge, and the training of human resources (Chang Castillo, 2013).

With respect to the research question, the analysis of national and international literature showed that it is the market that exercises governance in the cocoa VC and that the technical process standards are the mechanisms that help transfer the knowledge or requirements of the leading companies in the global agri-food system. This analysis also revealed a similar pattern in terms of the transfer of responsibility described by Hatanaka et al. (2005), since according to an official source, Ecuador, as in the rest of the developing countries (which were initially responsible for monitoring and controlling food safety and quality), transferred this power to private international certifiers. This event, seen in the light of Ponte and Gibbon (2005), corresponds to the integration of these widely accepted quality standards. In relation to transaction costs, unlike the analysis conducted at the international level (Griffiths & Zammuto, 2005) in which each government assumes the cost of creating competitive advantages, in Ecuador, it is Germany that assumes such cost almost in its entirety and, in fact, contemplates it in the Competitive Improvement Plan for organic cocoa until 2030 (Technical Commission of the European Union, 2018). The data obtained plus the documentary disclosure of Agrocalidad regarding the list of operators registered under the general regulations to promote and regulate organic-ecological-biological production in Ecuador, will allow future research to analyze key indicators on

the implementation of the strategy of the continuous improvement plan, SWOT of the cocoa VC, its horizontal governance, the links with higher organic certification and the composition of its actors.

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